MARSHALL STAR

Serving the Marshall Space Flight Center Community **Oct. 2, 2003**

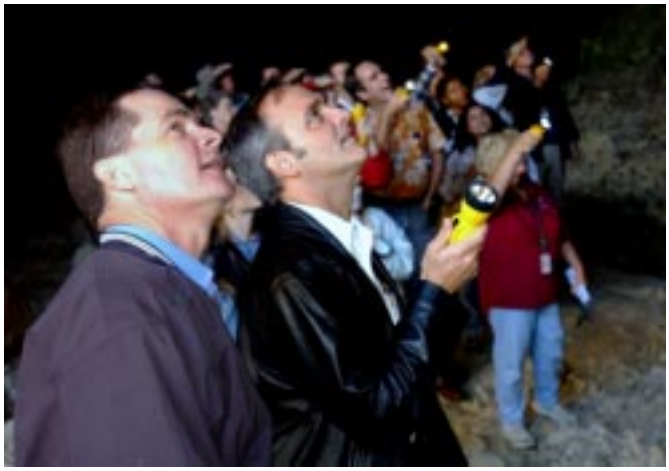


Photo by David Higginbotham, NASA/Marshall Center

Taking a CFC bus tour

During a Combined Federal Campaign bus tour, Marshall Center Director David King, left, and Marshall Deputy Director Rex Geveden, right, inspect the ceiling of Three Caves, which is part of the Land Trust of Huntsville and North Alabama. As part of the Combined Federal Campaign, bus tours are still available for Marshall team members to visit various agencies that benefit from contributions. For photos of the campaign kickoff, agency fair and recent bus tours, see pages 6-7.

NASA completes Orbital Space Plane design review

by Amie Cotton

NASA's Orbital Space Plane program is one step closer to becoming the nation's next space vehicle with the successful completion of its Systems Requirements Review.

The review evaluated the vehicle's concept design for providing crew rescue and transfer for the International Space Station. The NASA-led review evaluated contractor designs based on the primary design criteria, or Level 1 requirements, set by the Agency in February. The contractor teams designing the Orbital Space Plane — The Boeing Co., of Seal Beach, Calif.; Lockheed Martin in Denver; and a team including Orbital Sciences Corp. of Dulles, Va., and Northrop Grumman of El Segundo, Calif., have been working to develop system specifications, including systems analysis, trade studies, and concept feasibility in preparation for the review.

*See **Space Plane** on page 8*

NASA marks 45th anniversary this week

from NASA Headquarters

This week's marks the 45th anniversary of NASA, an agency that emerged in some measure because of the pressures of national defense during the Cold War with the Soviet Union

The Cold War represented a broad contest over the ideologies and allegiances of the nonaligned nations of the world. Space exploration emerged as a major area of this contest. From the latter 1940s, the Department of Defense pursued research and rocketry and upper atmospheric sciences as a means of assuring American leadership in technology.

A major step forward came when President Dwight D. Eisenhower approved a plan to orbit a scientific satellite as part of the International Geophysical Year, a cooperative effort to gather scientific data about Earth, for the period from July 1, 1957 to Dec. 31, 1958. The Soviet Union quickly followed suit, announcing plans to orbit its own satellite.

To commemorate NASA's birth on Oct. 1, 1958, the NASA History Office has a new Web site at: http://history.nasa.gov/45thann/html/45home.htm. The site contains links to photos, videos, documents, publications, biographies, and other information about the formation of NASA and its 45 years of activities.

A full-scale political crisis broke out on Oct. 4, 1957, when the Soviets launched Sputnik 1, the world's first artificial

*See **Anniversary** on page 8*

If it's not safe, say so!

Safety Day at Marshall is Wednesday

by Jonathan Baggs

When a baseball player misses a catch he's charged with an "error," an acknowledgement that he made a mistake.

Humans are like that. They make mistakes.

In the baseball player's case, the "error," or "mistake," is perhaps a momentary bit of embarrassment in front of a stadium full of fans — a small blip on his playing record – and maybe an extra run for the opposing team.

*See **Safety** on page 3*

'Ask the next question,' make a difference for Return to Flight

Director's Corner

Photo by Doug Stoffer, NASA/Marshall Center

King

On Aug. 26, the Columbia Accident Investigation Board (CAIB) released its much-anticipated report detailing the causes that led to the loss of the Columbia and her crew on Feb. 1.

The Agency braced itself for this report because as the days and weeks into the investigation began to unfold it became evident that the accident could have been prevented – the responsibility for what happened was ours as an agency. Although the thought of a preventable accident compounded our shock and grief, we all understood clearly that we needed this report. Our Administrator, Sean O'Keefe, pledged to the families of the Columbia 7 that we would "find the problem, fix it and fly again."

Although the report does not paint a glowing picture of the events leading up to the accident, we needed and wanted the information. We are indeed grateful to the Board for its outstanding work. The Board's members did an incredible job, and their report will assist us in fulfilling our pledge to the family of the crew, as well as our pledge to this nation.

The CAIB report gives us a much better understanding of what happened. As I stated in my Center TV address to the workforce on Aug. 28, we have been in lock step with the CAIB since day one. We immediately began making critical changes and we will continue to do so.

On Sept. 8, the Agency released the "NASA Implementation Plan for Return to Flight and Beyond." This plan is very detailed and outlines the steps we will take to comply with the CAIB's recommendations, and then some. As the co-chairs of the Space Flight Leadership Council have pointed out, the plan "is a 'living document' that will be continually updated to reflect your good ideas for how we may best accomplish our return to flight goals, as well as to record our tangible progress toward safe return to flight." The changes will not be easy, but are indeed necessary. We currently have teams working on these issues, and we will comply with all of the recommendations.

> ***"NASA is, and has always been, about hope for the future and seeing dreams come true."***

We are all eager to return to flight, but I believe we understand that we will not be driven by a schedule but by milestones, and we will fly when we are fit to fly.

Feb. 1 was a painful impetus for change; we must look at, and think about, safety in completely different ways – ways we never thought of before. We must be willing to take a personal inventory of our thinking and behavior – our culture. We must be willing to penetrate deeper and be willing to ask questions beyond what the data say. Learning to "ask the next question" is a way of uncovering all possible scenarios, and it is something that must become second nature. I want to encourage the entire team to learn to "ask the next question." The "next question" may very well be the one that avoids an accident.

As Wayne Hale, deputy manager, of the Space Shuttle Program at Johnson Space Center so poignantly stated on Sept. 17, "In my personal life, before Feb. 1, I thought we had it pretty much knocked. I would have told you we understood what we were doing and we had mature processes and good hardware. And I think all of those assumptions have been shattered." His statement, although painful, is on target.

> ***"I want to encourage the entire team to learn to 'ask the next question.' The 'next question' may very well be the one that avoids an accident."***

NASA is, and has always been, about hope for the future and seeing dreams come true. We are now living the message we have been sharing with the world for over four decades – ordinary people doing extraordinary things. We are moving forward diligently. We have a team that is talented, dedicated and motivated from within, but most importantly, committed to not repeating our mistakes.

I would like to challenge you to learn something new every day about safety, even if you do not work in a high bay or a lab. Part of changing our culture is to reverberate the message throughout the workforce. On Wednesday, Oct. 8, Marshall will hold its annual Safety Day. Please join the Safety & Mission Assurance Office and come ready to look at, and think about, safety in a completely different way. Think about the changes you can make and how you can make a difference as we prepare to return to flight.

—— ***David King***
Marshall Center Director

Safety

Continued from page 1

In the corporate world or manufacturing environment, human mistakes, or errors, can have disastrous results.

Reducing human error through employee behavior is the specialty of Steve Williams, this year's speaker at the Marshall Center's Safety Day on Wednesday.

Williams is president of Accelerated Development Systems Inc. – a Houston-based training and development firm specializing in helping companies achieve safety performance objectives by reducing human error. He will speak at 9:30 a.m. in Morris Auditorium on "Understanding Human Sources of Risk." He also will hold a workshop at 1 p.m. in Morris Auditorium on "Natural Leadership Ability and Personal Power."

Employee behavior and its effect on safety performance is not a new concept, according to information from Williams' company. According to Williams, in the 1930s, research by H.W. Heinrich proved that 88 percent of industrial accidents were caused by unsafe behavior and not related to an unsafe environment. At the same time, B.F. Skinner, a pioneer in behavioral science, approached the problem by observing what people do, determining why they do it and then applying intervention to reinforce correct behavior and modify incorrect behavior.

Courtesy photo

Williams

All Marshall team members are invited to Williams' talk and other events throughout Safety Day.

Safety day begins at 7 a.m. with activities arranged by Marshall's individual organizations. This year's theme is "If it's not safe, say so!" A safety video, "Speak Up! Commit to Give Feedback," will play on Marshall Television throughout the day.

Kick-off activities begin at 9 a.m. in Morris Auditorium with visits by astronauts, Williams' talk, Safety Excellence Awards and door prizes. Activities continue from 11 a.m.-1 p.m. in the tent area outside Bldg. 4316 with lunch. From 2-3 p.m. there will be presentations on the Columbia Accident Investigation Board report and on Return to Flight and Shuttle safety in Morris Auditorium. From 11 a.m.-3 p.m. there will be vendor and organization displays in Bldg. 4316. Buses will be provided to the various events.

The writer, an employee of ASRI, is editor of the Marshall Star.

Buses to provide transportation to Safety Day activities Wednesday

Buses will provide transportation to and from the following locations for Safety Day activities beginning at 8:30 a.m. Wednesday:

Stop No. 1
- Bldg. 4612 west end
- Bldg. 4610 northeast
- Bldg. 4487 south main

8:30 a.m. to 9 a.m.
10:30 a.m. to 3 p.m.

Stop No. 2
- Bldg. 4666 main
- Bldg. 4663 east B Wing
- Bldg. 4493 main
- Bldg. 4481 west end
- Bldg. 4471 east end

8:30 a.m. to 9 a.m.
10:30 a.m. to 3 p.m.

Stop No. 3
- Bldg. 4712 main
- Bldg. 4705 south
- Bldg. 4708 northwest
- Bldg. 4755 main

8:30 a.m. to 9 a.m.
10:30 a.m. to 3 p.m.

Stop No. 4
- Bldg. 4200 main
- Bldg. 4203 north

8:30 a.m. to 9 a.m.
10:30 a.m. to 3 p.m.

Note: Buses travel to Bldg. 4200, Morris Auditorium from 8:30 to 9 a.m.

Buses travel to and from Bldg. 4316 from 10:30 a.m. to 3 p.m.

Safety Day event schedule

- 7-9 a.m., Activities as arranged by employee organizations.
- 7 a.m.-3 p.m., "Speak Up! Commit to Give Feedback" video showing five minutes after the hour on Centerwide TV throughout the day, except during activities scheduled in Morris Auditorium.
- 9-9:30 a.m., Safety Day kickoff with opening comments and visiting astronauts in Morris Auditorium.
- 9:30-10:30 a.m., "Understanding Human Sources of Risk" presentation by Steve Williams in Morris Auditorium.
- 10:30-10:50 a.m., Safety Excellence Awards in Morris Auditorium.
- 10:50-11 a.m., Door prizes in Morris Auditorium.
- 11 a.m.-1 p.m., Lunch -- chicken filet sandwich "Meal Deal" in the tent area outside the Center Activities Bldg. 4316. Tickets cost $3 and must be pre-purchased by Friday.
- 11 a.m.-3 p.m., Safety, Health & Environmental Fair with vendor and organization displays and exhibits in Center Activities Bldg. 4316.
- 1-1:50 p.m., "Natural Leadership Ability and Personal Power" workshop by Steve Williams in Morris Auditorium.
- 2-2:30 p.m., Columbia Accident Investigation Board report presentation in Morris Auditorium.
- 2:30-3 p.m., Return to Flight and Shuttle Safety presentation in Morris Auditorium.
- 1-3 p.m., Organization activities

National Hispanic Heritage Month, 2003, by the President of the United States of America, a Proclamation

from the White House

America's diversity has always been a great strength of our nation.

As we celebrate National Hispanic Heritage Month, we recognize and applaud the extraordinary accomplishments of Hispanic Americans.

From America's beginning, Hispanic Americans have served as leaders in business, government, law, science, athletics, the arts, and many other fields. In 1822, Joseph Marion Hernandez became the first Hispanic to serve as a member of the United States Congress, representing the newly established territory of Florida. Businessman Roberto Goizueta, a refugee from Cuba who rose to become the CEO of one of America's largest corporations, is an inspiring example of what immigrants to America can achieve through hard work and character. Presidential Medal of Freedom recipient Roberto Clemente's athletic skills, generosity, and charity made him a legend on and off the baseball field. Through memorable recordings and performances, singer Celia Cruz celebrated her heritage and helped introduce salsa music to the United States.

Hispanic Americans have sacrificed in defense of this Nation's freedom, serving in every major American conflict. More than three-dozen Hispanic Americans have earned the Medal of Honor. Today, more than 125,000 Hispanic Americans serve in the Armed Forces, approximately 9 percent of our active-duty military. As we work to advance peace, freedom, and opportunity abroad, we are grateful to all of the brave men and women who serve our Nation, and to their families.

During Hispanic Heritage Month, I join with all Americans in recognizing the many contributions of Hispanic Americans to the United States, and in celebrating Hispanic heritage and culture. To honor the achievements of Hispanic Americans, the Congress, by Public Law 100-402 as amended, has authorized and requested the President to issue annually a proclamation designating September 15 through October 15, as "National Hispanic Heritage Month."

NOW, THEREFORE, I, GEORGE W. BUSH, President of the United States of America, do hereby proclaim September 15 through October 15, 2003, as National Hispanic Heritage Month. I call upon public officials, educators, librarians, and all the people of the United States to observe this month with appropriate ceremonies, activities, and programs.

IN WITNESS WHEREOF, I have hereunto set my hand this seventeenth day of September, in the year of our Lord two thousand three, and of the Independence of the United States of America the two hundred and twenty-eighth.

—George W. Bush
President, United States of America

Hispanic Heritage Month activities

from the Equal Opportunity Office

The Marshall Center's Equal Opportunity Office is co-sponsoring a number of activities to celebrate Hispanic Heritage Month in the Huntsville area, including:

- Oct. 3-4 - The second annual Hispanic Youth Conference for Hispanic school students in Alabama at the Huntsville Marriott hotel and the U.S. Space & Rocket Center. The conference is sponsored by the Marshall Center and Stillman College in Tuscaloosa to inspire Alabama's Hispanic high school students to continue their education.

- Oct. 20 - Casual Conversation with Marshall Center Director David King with Hispanic employees from 11:30 a.m.-12:30 p.m. in Bldg. 4200, Conference Room 915.

Photo by Renee Bouchard/NASA

Arcata named NASA Minority Subcontractor of the Year

NASA Deputy Administrator Fred Gregory, left, presents the 2003 NASA Minority Subcontractor of the Year award to Arcata Associates Inc. President Tim Wong last week in Washington, D.C. Arcata was chosen for outstanding performance on Lockheed Martin's Consolidated Space Operations Contract and Computer Sciences Corp.'s Program Information Systems Mission Services contract.

Boosting student excellence part of Jose Matienzo's culture

Marshall celebrates Hispanic Heritage Month

by Jonathan Baggs

As a Marshall Center rocket scientist, Jose Matienzo helps design things to go as far and as high as possible.

Matienzo, 41, also uses awareness of his Latino roots to encourage the next generation of Hispanic students to go as far and as high as possible through education.

A native of Puerto Rico, and son of a Caribbean-Indian-Anglo mother and Spanish father, Matienzo is manager of the Launch Services Program Support Office, working with expendable launch vehicles in Marshall's Space Transportation Directorate. He holds a bachelor's degree in aerospace engineering from the University of Alabama in Tuscaloosa.

Getting to where he is today didn't come easy. When Matienzo was 17 and about to start college, his mother died.

"It tested my will power, independence, courage and my desire to complete my education," Matienzo said. "But after getting one of the most challenging degrees in engineering, I knew I could learn and do anything that came my way."

It's that same attitude that Matienzo tries to get across when speaking to Hispanic youth groups.

Some people ask him why he dedicates so much time and energy to outreach. "I was in New York recently with Marshall's Starship 2040 exhibit and was talking to young students in the 'rough' neighborhoods," Matienzo said. "There were about 3,000 kids with every imaginable ethnic background. We would see their attitudes change from, 'I am too cool to listen to this,' to those same kids asking some of the better, more intelligent, questions. It never fails.

"We felt we were touching and maybe even making a difference in some of those kids," Matienzo continued. "We had a group of kids that walked 45 minutes to come see the exhibit and they treated us like super heroes. It was very touching."

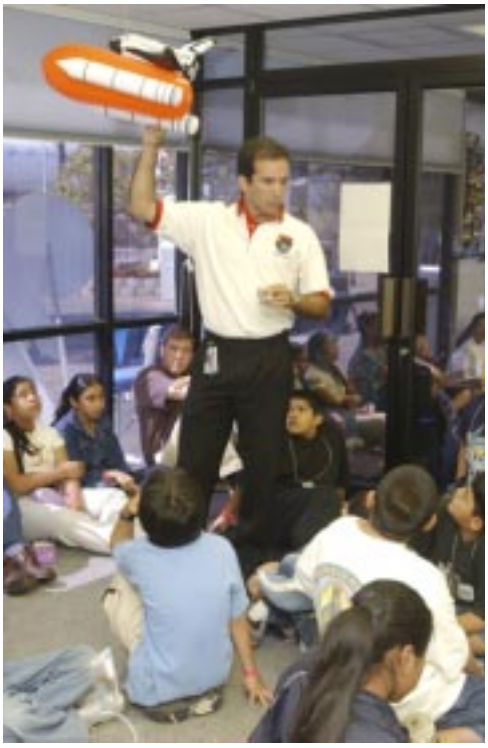


Photo by Emmett Given, NASA/Marshall Center

Jose Matienzo explains space propulsion to Hispanic students at the U.S. Space & Rocket Center earlier this year.

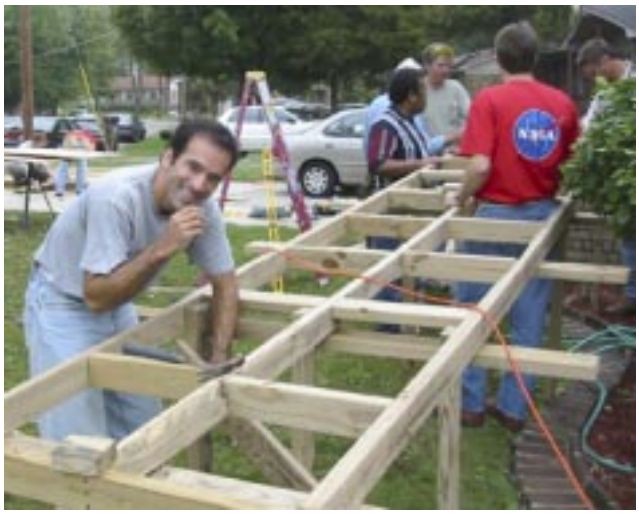
As chairman of this year's Hispanic Heritage Month at the Marshall Center, Matienzo is excited that the upcoming annual Hispanic Youth Conference in Huntsville has a record number of participants. More than 200 Hispanic students from across Alabama will attend the conference Friday and Saturday at the Huntsville Marriott and U.S. Space & Rocket Center. The conference's goal is to motivate the students to stay in school and get a college education.

Hispanic Heritage Month serves as an important educational tool as well, both for Hispanics and non-Hispanics, according to Matienzo.

"It is more important for me now than when I was in my early 20s, because I understand the need for it," Matienzo said. "I learned that Hispanic culture had been ignored and even played down or stereotyped as always 'poor,' 'ignorant' and 'uneducated.' I ran into that right here at Marshall when I first started working and founded the first Marshall Employee Hispanic Association for the 50-or-so Hispanics here at the time. People were hesitant and cautious about exposing they were Hispanic because they didn't want to 'throw away' the respect they had earned."

Matienzo is glad Hispanic employees are embraced at Marshall. "The Hispanic Heritage activities are a good way to educate and expose people to our culture – not only those who are not Hispanics, but even those who are," he said. "There's a lot that we do not know about ourselves."

The writer, an employee of ASRI, is editor of the Marshall Star.



Courtesy photo

Jose Matienzo volunteers his time to help with construction projects for CASA (Care Assurance System for the Aging and Homebound) in a Huntsville neighborhood this past spring.

Marshall team pulls together for the

Marshall team members helped get the 2003 Tennessee Valley Combined Federal Campaign off to a rousing start during last week's kickoff program and agency fair.

This year's theme is "You are not alone." Marshall's goal is to raise $500,000 during the six-week campaign.

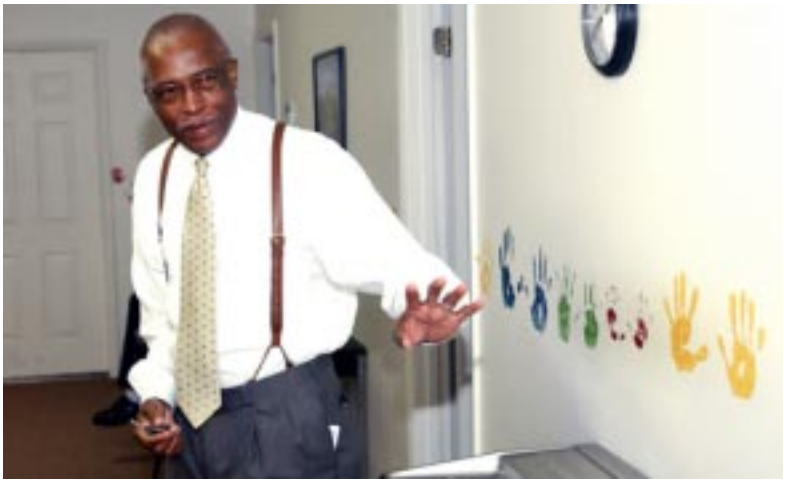
An agency fair in the Center Activities Bldg. 4316 allowed agencies that benefit from contributions to show Marshall team members why giving is important to their programs.

Twelve bus tours also were organized so Marshall team members could visit the agencies and see first-hand how their contributions would be used.

To find out more about this year's campaign, or to make a donation, go to the CFC Web site on "Inside Marshall" or visit http://cfc2003.msfc.nasa.gov/.

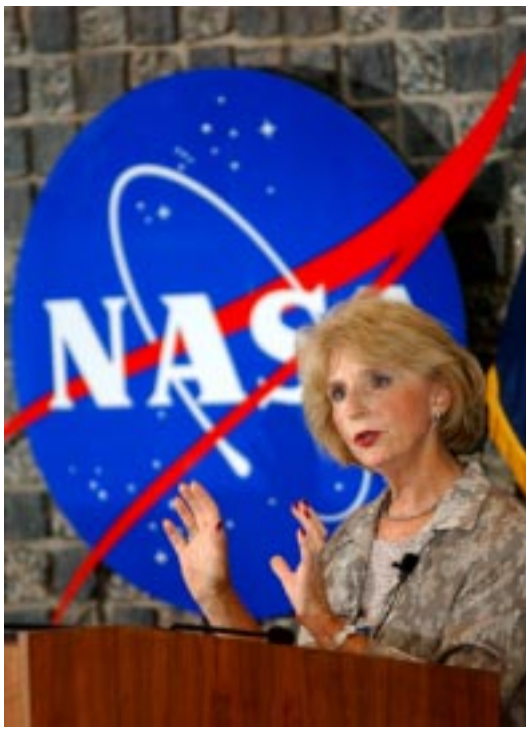
Photos by David Higginbotham, NASA/Marshall Center

Carolyn McMillan, left, the Marshall Center's CFC executive chairperson, talks with Anthony Ford, right, chaplain of the Downtown Rescue Mission in Huntsville. Ford was one of the exhibitors at the agency fair last week.



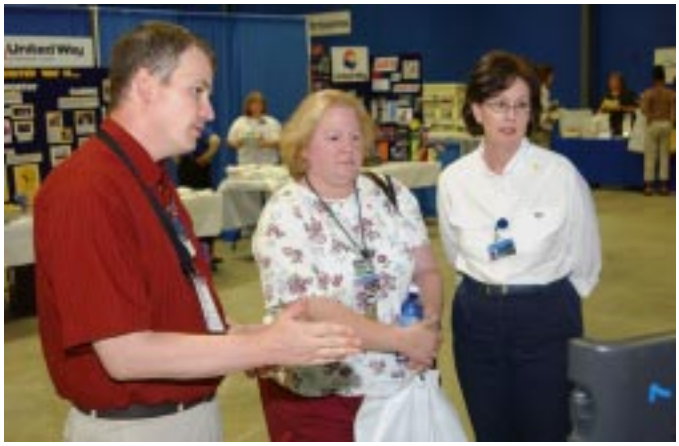
Bob Richardson, president of the Harris Home for Children in Huntsville, shows some of the hand print art made by volunteers and children. The agency provides full-time foster care for neglected and dependent boys and girls between the ages of 12 and 21. The Harris Home was part of this year's bus tours for Marshall team members.

Carla Hooper, center, talks to United Way representatives during the agency fair last week.

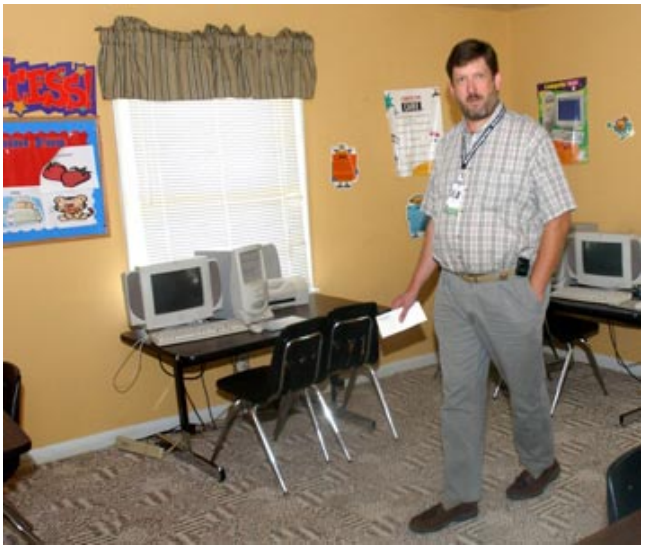


Linda Spalla speaks to Marshall team members during the Combined Federal Campaign kickoff in Morris Auditorium. Spalla is the former president and chief executive officer of Huntsville CBS affiliate WHNT-TV and chairperson of the Madison County United Way.

2003 Combined Federal Campaign



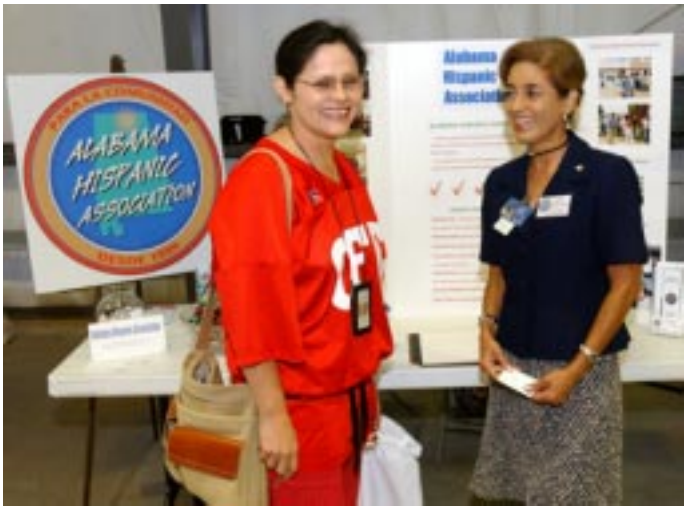
John Strah, left, with Feed the Children, talks with Sandra Jeffers, center, and Kathy Day, right, during the agency fair.



Marshall team member Jim Rogers visits a computer room at the Harris Home for Children in Huntsville.

Gwen Bell, left, with the Huntsville Make-A-Wish Foundation, discusses the program's goals with Leslie Norris, center, and Vanita Brown, right.

Pat Fanning, left, with the Volunteers of America-North Alabama, greets Marshall team members Cassandra Pitts, center; Tricia Kennedy, second from right; and Susan Cloud, right.



Marshall team member Elia Ordonez, left, with Norma Reeves of the Alabama Hispanic Association.

Rhonda Childress-Thompson, right, pets "Summer" at the Therapy Partners Inc. booth while Margie Weisman, left, explains the program.

Space plane

Continued from page 1

The System Requirements Review includes analysis of requirements and supporting technical documentation to ensure the system is safe, reliable, maintainable and affordable. It is one in a series of reviews that occurs before the Orbital Space Plane system is built.

In addition, the review set Level 2 requirements, guidelines that further narrow the scope and add a level of detail to the system design. The Level 2 requirements address guidelines for safety, launch, emergency-return and crew-transfer missions, mission frequency, on-orbit mission duration, contingency cargo requirements, and docking and interfacing with the Space Station. The requirements also include limits on the gravitational loads on the crew, health monitoring of the crew, communications with the Space Station and mission control on Earth, reliability, system lifetime, and logistics. Each level of requirements provides a narrower parameter for the design of the vehicle system.

"This review is a critical step in making the Orbital Space Plane a reality," said Dennis Smith, Orbital Space Plane program manager. "These requirements are the instruction manual for designing the entire system that will provide safe, reliable access to and from the International Space Station."

The Level 2 requirements are contained in a package of technical documents and plans, which include the Orbital Space Plane Systems Requirements Document, the International Space Station Interface Requirements Document, the Orbital Space Plane to Expendable Launch Vehicle Interface Definition Document, and the Orbital Space Plane Human Rating Plan, along with other reference and guidance documentation. An executive summary of the Level 2 requirements is on the Orbital Space Plane Web site. Following review of the documentation for export-control and security issues, the Level 2 documentation also will be available online.

A System Definition Review is scheduled for November 2003. It will include a further, more focused evaluation of the concept design including risk reduction and breakdown of the functional elements of the system based on the Level 2 requirements. The review also will set Level 3 requirements for the Orbital Space Plane system based on evaluation of the program objectives and contractor feedback.

The program is scheduled to issue a request for proposal to the three contractor teams in November 2003. A decision to develop a full-scale vehicle system is expected in 2004.

For the executive summary and other information about the Orbital Space Plane, visit: http://www.ospnews.com.

The writer, an employee of ASRI, supports the Media Relations Department.

Anniversary

Continued from page 1

satellite, as its International Geophysical Year entry. This had a "Pearl Harbor" effect on American public opinion, creating an illusion of a technological gap.

As a direct result of this crisis, the United States responded with the launch of Explorer I on Jan. 31, 1958. Explorer I went into space aboard a modified Jupiter-C rocket developed by the Army's von Braun team in Huntsville. Two years later that team would form the nucleus of NASA's Marshall Center.

NASA began operations on Oct. 1, 1958, absorbing into it the earlier National Advisory Committee for Aeronautics, its 8,000 employees, an annual budget of $100 million, three major research laboratories — Langley Aeronautical Laboratory, Ames Aeronautical Laboratory, and Lewis Flight Propulsion Laboratory — and two smaller test facilities.

It quickly incorporated other organizations into the new agency, notably the space science group of the Naval Research Laboratory in Maryland, and the Jet Propulsion Laboratory managed by the California Institute of Technology for the Army. In 1960, the Marshall Center was formed. Eventually, NASA created other Centers. Today, it has ten located around the country.

NASA began to conduct space missions within months of its creation, and in its 45 years, it has made historic achievements in many areas of aeronautics and space research. The most well known efforts are the human space flight initiatives. These began with Projects Mercury and Gemini in the 1960s, hit a major highlight with the lunar landings of Project Apollo, continued on in the 1970s with Skylab and the Apollo-Soyuz Test Project, and then carried on to the Space Shuttle Program in the 1980s and 1990s. Space science programs have included missions to our Moon and all the planets in our solar system except Pluto.

In Earth science, remote-sensing satellites such as Landsat and meteorological spacecraft have helped scientists understand the complex interactions between ecological systems on Earth. NASA's aeronautics research has helped to enhance air transport safety, reliability, efficiency, and speed through such programs as the X-15, lifting bodies, and general aviation.

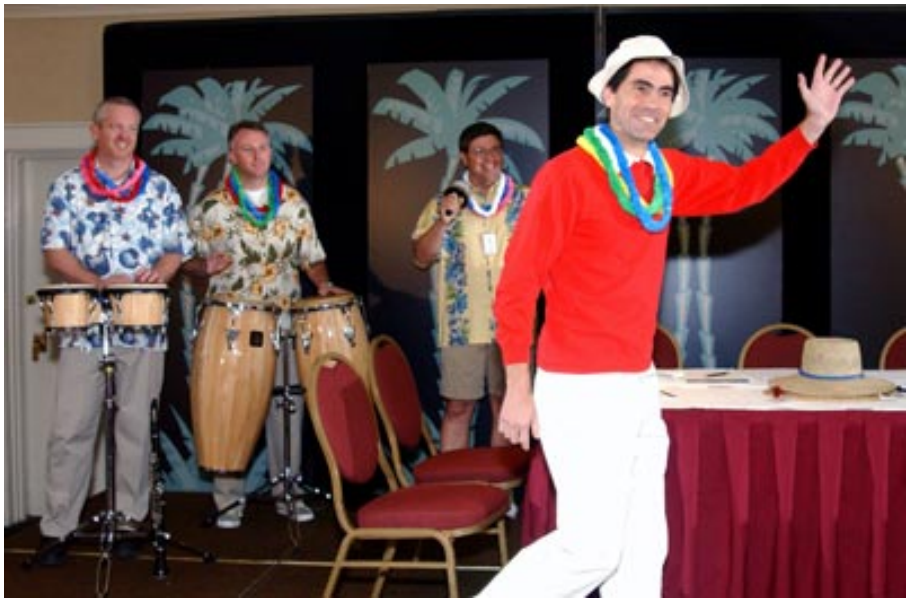
Since its inception in 1958, NASA has accomplished many great scientific and technological feats. NASA technology has been adapted for many non-aerospace uses by the private sector. At its 45th anniversary, NASA remains a leading force in scientific research and in stimulating public interest in aerospace exploration, as well as science and technology in general.

Perhaps more importantly, our exploration of space has taught us to view Earth, the universe, and ourselves in a new way. While the tremendous technical and scientific accomplishments of NASA demonstrate vividly that humans can achieve previously inconceivable feats, we also are humbled by the realization that Earth is just a tiny "blue marble" in the cosmos.

Island fun part of Flight Projects Directorate awards ceremony

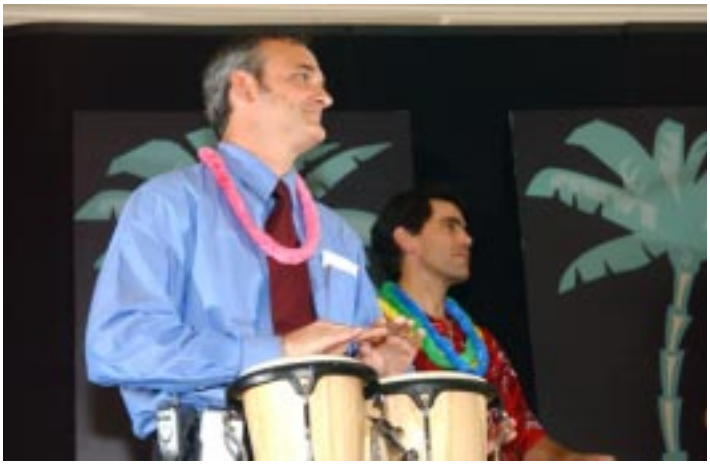
Members of the Flight Projects Directorate recently gathered for their annual awards ceremony and some tropical island fun.

More than 60 team members were honored for outstanding achievements during the year. Almost 200 team members dressed in tropical attire and were entertained with a skit based on the 1960s television show "Gilligan's Island." Marshall Deputy Director Rex Geveden got into the fun by playing the bongos for the crowd.



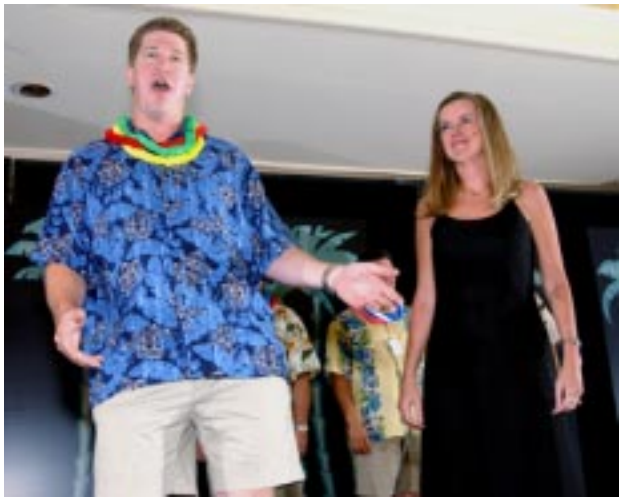
Tony Lavoie as "Gilligan" finally gets off the island.

Photos by David Higginbotham, NASA/Marshall Center

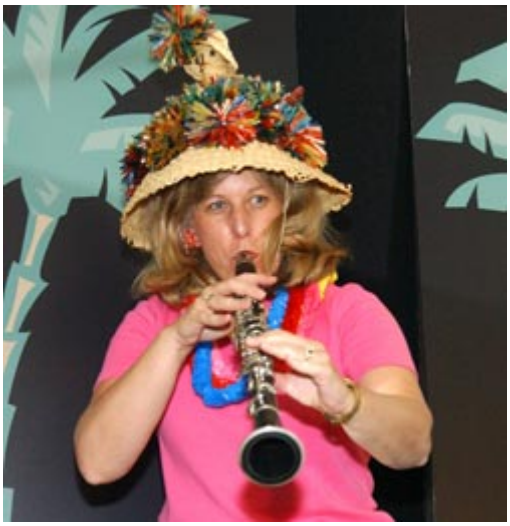


Marshall Deputy Director Rex Geveden plays some mean bongos.

Tina Swindell sings "Dancin' Shoes."



Greg McDaniel, left, and Teresa Vanhooser, right, pantomine to "The Lion Sleeps Tonight."



Dr. Jan Davis, director of Marshall's Safety and Mission Assurance Office, gives a go at playing the clarinet. Davis is the former director of the Flight Projects Directorate.

Job Announcements

MS03D0183, Human Resources Specialist. GS-0201-12, Human Resources Department, Customer and Employee Relations Directorate. Closes Oct. 3. Contact: Edwina Bressette at 544-8115.

MS03D0190, AST, Reliability & Quality Assurance. GS-0861-13, Safety and Mission Assurance Office, Shuttle Assurance Department. Closes Oct. 16. Contact: Rita Evans-McCoy at 544-7507.

MS03D0191, AST, Reliability & Quality Assurance. GS-0861-13, Safety and Mission Assurance Office, Shuttle Assurance Department. Closes Oct. 16. Contact: Rita Evans-McCoy at 544-7507.

MS03D0192, AST, Reliability & Quality Assurance. GS-0861-13, Safety and Mission Assurance Office, Shuttle Assurance Department. Three vacancies in New Orleans. Closes Oct. 16. Contact: Rita Evans-McCoy at 544-7507.

MS03D0193, AST, Reliability & Quality Assurance. GS-0861-13, Safety and Mission Assurance Office, Shuttle Assurance Department. Duty location Kennedy Space Center, Fla. Closes Oct. 16. Contact: Rita Evans-McCoy at 544-7507.

MS03D0194, AST, Reliability & Quality Assurance. GS-0861-13, Safety and Mission Assurance Office, Shuttle Assurance Department. Two vacancies in Brigham City, Utah. Closes Oct. 16. Contact: Rita Evans-McCoy at 544-7507.

MS03D0195, AST, Reliability &Quality Assurance. GS-0861-13, Safety and Mission Assurance Office, Shuttle Assurance Department. Two vacancies in Los Angeles. Closes Oct. 16. Contact: Rita Evans-McCoy at 544-7507.

MS03D0200, AST, Structural Dynamics. GS-0861-09-11, Engineering Directorate, Structures, Mechanics and Thermal Department. Closes Oct. 2. Contact: Kevin Plank at 961-0157.

MS03D0201, AST, Reliability & Quality Assurance. GS-0861-13. Safety and Mission Assurance Office, Shuttle Assurance Department. Two vacancies at Kennedy Space Center, Fla. Closes Oct. 16. Contact: Rita Evans-McCoy at 544-7507.

MS03D0203, AST, Reliability & Quality Assurance. GS-0861-13, Safety and Mission Assurance Office, Shuttle Assurance Department. Closes Oct. 16. Contact: Rita Evans-McCoy at 544-7507.

MS03D0204, AST, Reliability & Quality Assurance. GS-0861-13, Safety and Mission Assurance Office, Shuttle Assurance Department. Closes Oct. 16. Contact: Rita Evans-McCoy at 544-7507.

MS03D0205, AST, Reliability & Quality Assurance. GS-0861-13, Safety and Mission Assurance Office, Shuttle Assurance Department. Closes Oct. 16. Contact: Rita Evans-McCoy at 544-7507.

MS03D0207, AST, Liquid Propulsion Systems. GS-0861-13, Space Transportation Directorate, Subsystems & Component Development Department. Closes Oct. 3. Contact: Jim Bramblett at 544-3398.

MS03D0208, AST, Solid Propulsion Systems. GS-0861-07, Space Transportation Directorate, Vehicle & Systems Development Department. Closes Oct. 3. Contact: Jim Bramblett at 544-3398.

MS03D0209, AST, Liquid Propulsion Systems. GS-0861-11, Space Transportation Directorate, Subsystems & component Development Department. Closes Oct. 3. Contact: Jim Bramblett at 544-3398.

MS03D0210, AST, Liquid Propulsion Systems. GS-0861-11, Space Transportation Directorate, Subsystems & Component Development Department. Closes Oct. 3. Contact: Jim Bramblett at 544-3398.

MS03N0213, AST, Technical Management. GS-0801-12, 13. Office of the Director MSFC. Closes Oct. 9. Contact: Kevin Plank at 961-0157.

MS03D0214, Executive Assistant. GS-0301-12, 13, Office of the Director MSFC. Closes Oct. 9. Contact: Kevin Plank at 961-0157.

MS03S0215, Director, Flight Projects. Senior Executive Service ES-0801-01-06, Flight Projects Directorate. Closes Oct. 13. Contact: Diedra Williams at 544-5721.

MS03D0216, AST, Liquid Propulsion Systems. GS-0861-07, Space Transportation Directorate, Subsystems & Component Development Department. Closes Oct. 3. Contact: Jim Bramblett at 544-3398.

MS03S0217, Director, Center Operations. Senior Executive Service ES-0301-01-06, Center Operations Directorate. Closes Oct. 13. Contact: Diedra Williams at 544-5721.

MS03D0218, AST, Liquid Propulsion Systems. GS-0861-09, Space Transportation Directorate, Subsystems & Component Development Department. Closes Oct. 3. Contact: Jim Bramblett at 544-3398.

MS03D0219, AST, Liquid Propulsion Systems. GS-0861-09, Space Transportation Directorate, Subsystems & Component Development Department. Closes Oct. 3. Contact: Jim Bramblett at 544-3398.

MS03D0220, Systems Accountant. GS-0510-13, Office of the Chief Financial Officer, IFMP Administrative Systems Implementation Office. Closes Oct. 2. Contact: Dana Blaine at 544-7514.

MS03D0221, Systems Accountant. GS-0510-13, Office of the Chief Financial Officer, IFMP Administrative Systems Implementation Office. Closes Oct. 2. Contact: Dana Blaine at 544-7514.

MS03D0222, Management Support Assistant (OA). GS-0303-07, Solid Rocket Booster Project, Space Shuttle Propulsion Office. Closes Oct. 3. Contact: Edwina Bressette at 544-8115.

MS03D0223, Program Manager. GS-0340-14, Office of the Chief Financial Officer, IFMP Administrative Systems Implementation Office. Closes Oct. 14. Contact: Dana Blaine at 544-7514.

MS03D0224, Program Manager. GS-0340-14, Office of the Chief Financial Officer, IFMP Administrative Systems Implementation Office. Closes Oct. 14. Contact: Dana Blaine at 544-7514.

MS03D0226, AST, Solid Propulsion Systems. GS-0861-09, Space Transportation Directorate, Vehicle & Systems Development Department. Closes Oct. 14. Contact: Jim Bramblett at 544-3398.

MS03D0227, AST, Solid Propulsion Systems. GS-0861-12, Space Transportation Directorate, Vehicle & Systems Development Department. Closes Oct. 14. Contact: Jim Bramblett at 544-3398.

MS03D0228, AST, Liquid Propulsion Systems. GS-0861-13, Space Transportation Directorate, Vehicle & Systems Development Department. Closes Oct. 14. Contact: Jim Bramblett at 544-3398.

Center Announcements

Safety team sponsoring fire extinguisher inspections

The Marshall Safety & Health Action Team, in conjunction with Fire Prevention Week, will host Home Extinguisher Maintenance Day from 10 a.m.-2 p.m. Tuesday in the Bldg. 4203 lobby. Marshall team members can bring their home fire extinguishers for inspection, recharging and hydrostatic testing. Safety items, including fire extinguishers, also will be available for purchase. Fire Prevention Week is Oct. 6-10. For more information, call Monte Gravunder at 544-1986.

Symposium on liquid space propulsion is Oct. 27-30

The Marshall Center is hosting the Fifth International Symposium on Liquid Space Propulsion in Chattanooga, Tenn., on Oct. 27-30. The invitation-only symposium is the principal international forum for all aspects of liquid rocket propulsion. This year's theme is "Long Life Combustion Devices Technology" and will cover all aspects of analysis, modeling and design. Experts from around the world also will conduct forums. For details, go to http://www.chattanoogan hotel.com/5thinternational/index.html. To inquire about an invitation to the symposium, call Roberto Garcia at 544-4974 by Friday.

Applied Systems Engineering workshop will be Oct. 14-17

An Applied Systems Engineering workshop will from 8 a.m.-4:30 p.m. Oct. 14-17 at the Marshall Institute in Room 711. The workshop is a review of the latest principles for systems engineering in the context of NASA and Marshall Center development cycles with realistic practice on how to apply these principles. The workshop is geared for program managers, project managers, systems engineers, technical team leaders and others who participate in defining and developing complex systems. Registration is online through AdminSTAR. For more information, call Jerry Miller at 544-7555

Astrionics Retirees to meet Monday

Marshall Center Astrionics retirees will meet at 9 a.m. Monday at Gibson's Bar-B-Q at 3319 Memorial Parkway Southwest in Huntsville. The group meets the first Monday of each month. For more information, call Jim Lewis at (256) 353-1557.

Instrumentation Astrionics lab retirees to meet Tuesday

Instrumentation Division Astrionics Lab retirees and friends will meet Tuesday at 11 a.m. at the Redstone Golf Course coffee shop. For more information, call Tom Escue at (256) 232-1549.

Nobel Laureate Dr. Eric Cornell to speak at Alabama A&M

The Sixth Annual Putcha Venkateswarlu Memorial Lecture at Alabama A&M University in Huntsville will be at 3 p.m. Friday in the Learning Resource Center. Dr. Eric A. Cornell, of the University of Colorado and the National Institute of Standards and Technology, will speak. He was awarded the 2001 Nobel Prize in Physics, along with Dr. Wolfgang Ketterle and Carl E. Wienman for "The Achievement of Bose-Einstein Condensation in Dilute Gases of Alkali Atoms." A reception will follow the lecture at 5 p.m. in the West Campus Ernest Knight Center at the university. Marshall team members are invited. For more information, call Professor Ravi Lal at (256) 372-8148.

Proposals sought for Center Director's Discretionary Fund

Proposals are being accepted for project awards from the fiscal 2004 Center Director's Discretionary Fund. The fund provides resources to pursue innovative and creative research ideas relevant to Marshall roles and missions for which other funding sources are unavailable. Proposals are due Oct. 9. For submission instructions and more information, see "Inside Marshall."

SLTS design and operations workshop is Nov. 17-19

A Space Launch and Transportation Systems Design and Operations workshop will be Nov. 17-19 at the Marshall Center in Bldg. 4200, Room G-13E. The course is for space professionals who produce, operate and use cost-effective space launch and transportation systems. The workshop's focus is technical risk identification and mitigation in the most cost-effective manner, while maintaining technical integrity of a vehicle and infrastructure. For more information, see "Inside Marshall."

Procurement Office retirees to meet Tuesday

Procurement Office retirees will meet for breakfast at 9:30 a.m. Tuesday at Mullins Restaurant on Andrew Jackson Way in Huntsville. For more information, call 837-5604.

Space society hosting program on bomber as launch platform

The Huntsville L5 chapter of the National Space Society will host a program at 7:30 p.m. Thursday, Oct. 2, at the Huntsville-Madison County Public Library at 915 Monroe Street in Huntsville. Benjamin Donahue, Third Generation Space Technology Task Lead for the Boeing Co., will discuss "The XB-70 Valkyrie: Can a Cold-War Era Supersonic Bomber Serve as a Space Launch Platform?" Admission is free. For more information, call Ronnie Lajoie at 721-1083.

NARFE to meet Saturday

The National Association of Retired Federal Employees will meet at 9:30 a.m. Saturday at the Senior Center on Drake Avenue in Huntsville. Gary Chandler, legislative aide to U.S. Rep. Bud Cramer, will speak at 10 a.m on the status of legislation affecting retired federal employees. For more information, call 881-4944 or 881-3168.

Classified Ads

Miscellaneous

★ Dark solid wood bedroom suite, full-size bed w/ mattress/box springs, dresser/chest of drawers, $400. 881-8087.
★ IMAC computer, $400. 536-5132
★ Portable workshop/storage building, 10'x14', aluminum exterior, windows, light and power outlets, $1,400. 880-7889
★ Solid pine crib and changing station convertible to full-size bed & six-drawer dresser, $300. 830-5285
★ Victorian style detailed white iron & brass bed, queen size, $700. 256-233-0607
★ Coin operated slate pool table, 7', must disassemble to move, $500. 885-5973
★ Queen waterbed, headboard, pedestal, cushioned side rails, heater, waveless mattress, cover, bedding, $150. 883-6654
★ Two AKC German Shepherds, females, 7 months old, Black and Tan, all shots, $200. 325-2717
★ Victorian Style white iron and brass bed, queen size, $700. 233-0607
★ Unusual small cedar chest, $100; end table,$20; small animal cage, $40. 539-3294
★ Old-fashioned kitchen cupboard, dark pine w/ white porcelain knobs, storage in bottom, $250. 880-7376
★ Polar A1 heart rate monitor, 3-months old, $35. 655-2055
★ Solid Oak dining set: 84" table, 8 chairs, matching china cabinet; rugs included, $1,300. 881-2643
★ Fender Banjo w/hard case, $250; New violin w/ hard case & bow, $100. 722-9989
★ Chrome tubular steps for Dodge ext. cab truck, $150 for pair. 508-4503
★ GE double wall oven, 27", white, $375; stovetop, $175. 882-7376.
★ Two adult Six Flags Over Georgia tickets, good thru November 2, $21 each. 256-738-3418
★ Display coffee table, solid wood w/glass beveled top, 3'x3', $75. 256-655-8975
★ Eggshell ruffled bed skirt for double bed, $10. 461-8369
★ Stock cylinder heads, pair, 1991 Mustang 5.0, $100; SIG 232 380 auto LNIB, $375. 837-9479
★ Backpack/carry on suitcase, $20. 539-3284.
★ Kenmore super capacity white electric dryer, 29", 2-years-old, shoe rack/manual included, $300. 751-4043
★ 1987 Honda Goldwing motorcycle, 48K miles, fully loaded, $3,995. 882-9361
★ Honda 75 Shadow, low miles, $4,400. 694-9619
★ 1999 HD Sportster XL833 Hugger, low mileage, many extras, $7,000. 859-8489
★ Twelve storm windows, $25 each; white carpet, new, 8'6"x8'6", $100; Lazy-Boy recliner, brown/ rust, $100. 881-1904
★ Canon StarWriter Jet 300 electronic typewriter w/ LCD screen, $75. 539-7855
★ Craftsman table saw, 1HP motor, $100. 534-5398
★ Sony/Mavica FD-83 digital camera, 3-yrs. old, 3X zoom, Sony long-life battery, case/strap, $300. 256-653-5731
★ 1977 Avion travel trailer, 27', for hunting and camping, $5,000. 931-427-2059
★ Alabama vs. Southern Miss. tickets, Section U3-P, 4 together at $50 each. 655-3065
★ White/gold French Provincial bedroom set: double bed w/mattress, dresser w/mirror, chest, night table, $400. 722-2146
★ Bow-Flex Power Pro, 2 extra 50# power rods, rowing bar, leg press belt, $440. 461-7712
★ Palm V accessories kit, modem, travel kit, wireless Web, GSM upgrade, cases, faceplates. $20. 772-8489
★ Oak kitchen table corner unit w/extra bench and pads, $300. 922-9294
★ Two black Coach purses, leather, $90 each. 256-757-0469
★ Full size mattresses, 2 months old, 5-yr. warranty, $100; Safety 1st baby monitor, $5. 682-9540
★ NordicTrack skier, Achiever model, includes computer & floor mat, $90. 536-0655
★ Farmhouse style table, 36"x60" w/six chairs, $250 firm. 461-8848
★ 1960s school flip-top record player. Compact. Works. Needs needle. $15. 256-306-0700

Vehicles

★ 1996 Mazda Miata, new convertible top, 44K miles, blue, camel leather, $9,500. 881-3527
★ 1989 Holiday Rambler Class C motor home, 27', cab over jacks, sleeps 6, $12,500. 318-2921
★ 2000 Mazda 626, 4-door, 41K miles, silver w/gray interior, PS/PB/PB/PL, AM/FM/CD cassette, a/c, $9,950. 256-230-0806
★ 1999 Mustang, commemorative edition, 56K miles, AM/FM/tape/CD, multi-CD changer, $8,395. 337-2801.
★ 1993 Turbo Volvo, gold, sunroof, leather, almost new tires $3,500. 931-937-6148.
★ 1994 Saturn, 4-door, automatic, 135K miles, Traction control, a/c, maintenance records, $1,975. 256-753-2278
★ 2001 White Land Rover Discovery, many amenities. 348-4889
★ 1995 Ford Windstar LX , 145.5K miles, $3,000. 837-3488/Ali evenings
★ 1998 Ford Ranger XLT, X-cab, 4-cyl., 5-speed, FM/CD, 51K miles, $7,500. 882-5363.
★ 1994 Corvette, LT1, white, gray/black interior, keyless entry, power seats, 176k miles, $8,000. (256) 325-6885
★ 1995 Nissan Maxima, burgundy, all-power, sunroof, BOSE CD/cassette, needs new air conditioner, $2,000. 457-3965
★ 1992 Nissan Maxima, white, V6, keyless entry, power windows/locks, GXE, 146K miles, $3,100. 721-7799
★ 2000 Toyota Tundra SR5, access cab, 49K miles, V8, CD, 4-door, black/tan, tool box, $16,900. 233-3407
★ 1991 Explorer XLT, 63K miles, 4-door, V6, leather, sunroof, many new parts, $6,000. 880-6498
★ 1991 Ford Explorer, Eddie Bauer, 4x4, tow hitch, a/c, $1,650. 325-6000
★ 1986 F150, 4-speed w/overdrive, 6-cyl., 5L, crew cab, SWB, class 3 hitch, $2,100. 882-0461
★ 1977 Chevrolet custom deluxe, V8, auto, camper shell, 115K miles, new paint, $3,000. 256-858-5552
★ 2001 Chrysler/Concorde LXI, sunroof, CD/tape player, loaded, 48K miles. 828-4251
★ 1991 Lincoln Continental Signature Series, $1,500. 883-2869
★ 1989 S-15 GMC Jimmy, Gypsy package, 4.3L, 4WD, black/blue, 230K miles, $1,600. 837-6517
★ 1980 Chevy Silverado, 93K actual miles, long wheelbase, auto, air, power steering/brakes, $2,500. 880-6254
★ 1993 GMC Conversion van, 89K miles, one-owner, 350/V8, $6,000.
★ 2002 Chevy Cavalier, blue, 2-door, 35K miles, $4,900. 655-0325

Wanted

★ Outboard motor, 5-20HP, running or not. 256-830-8934
★ Queen size waterbed mattress. 479-1653
★ Laser Jet printer. 883-2757
★ Gas Grill, must be in good condition or easy re-builder. 931-580-1553

Free

★ Miniature beagle, stray, assume no shots, female. 895-9348

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